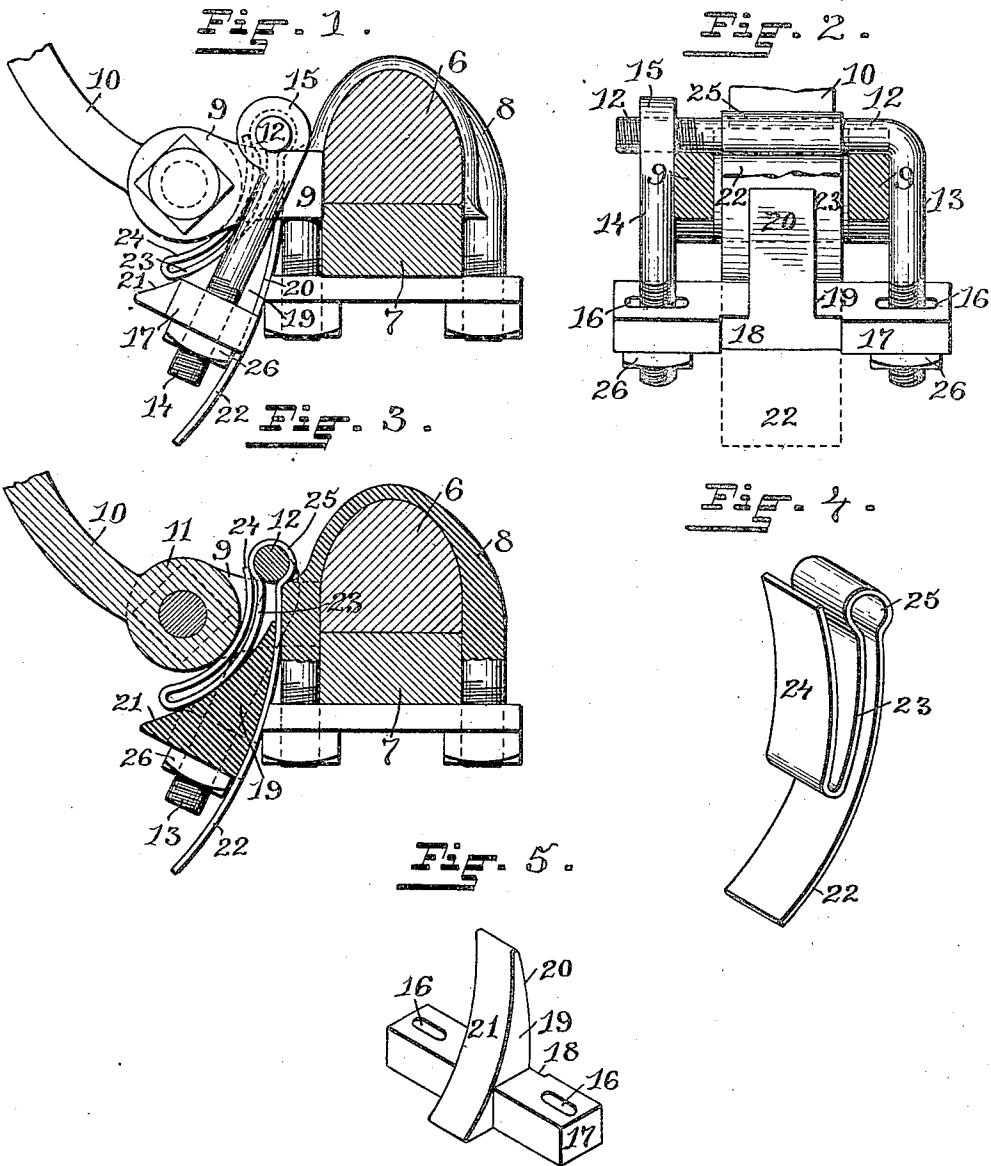


(No Model.)

A. FRASER.  
ANTIRATTLE FOR THILL COUPLINGS.

No. 529,525.

Patented Nov. 20, 1894.



WITNESSES:

Henry J. Miller  
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# UNITED STATES PATENT OFFICE.

ALLAN FRASER, OF PROVIDENCE, RHODE ISLAND.

## ANTIRATTLER FOR THILL-COUPPLINGS.

SPECIFICATION forming part of Letters Patent No. 529,525, dated November 20, 1894.

Application filed September 17, 1894. Serial No. 523,185. (No model.)

*To all whom it may concern:*

Be it known that I, ALLAN FRASER, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Antirattlers for Thill-Couplings; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in anti-rattling devices for thill-couplings.

One object of the invention is to provide a novel anti-rattling device for thill-couplings which may be adjusted to various widths of couplings.

Another object is to so construct an anti-rattler for thill-couplings that a compound bent spring may be adjusted in tension by means of a peculiar tension-exerting device.

Still another object is to provide a novel anti-rattler in which a bent spring may be more securely held in place than as heretofore constructed.

The invention consists in the peculiar construction of the spring and the combination therewith of means for securing it in place.

The invention also consists in the novel adjustable frame adapted to fit various widths of thill-couplings.

The invention still further consists in the spring-spreader or tension-exerting device and its combination with a spring and a suitable frame.

The invention likewise consists in such other novel features of construction and combination of parts as may hereinafter be more fully described and pointed out in the claims.

Figure 1 represents a side view of the improved anti-rattler attached to a thill-coupling. Fig. 2 represents a back view of the same, the long leaf of the spring being broken away to show the wedge and the recessed portion of the cross-bar in which the long leaf of the spring is engaged to prevent lateral movement. Fig. 3 represents a vertical cross-sectional view of the coupling and anti-rattler. Fig. 4 represents a perspective view of the spring removed from the frame, Fig. 5 being a similar view of the wedge with its cross-bar.

Similar numbers of reference designate corresponding parts throughout.

In the drawings 6 and 7 represent respectively the wood and metal portions of an axle and 8 the yoke by means of which the thill-coupling is secured thereto. From the yoke 8 extend the arms 9—9 between which the thill-bar 10 is pivoted, the separation of the arms 9—9 being determined by the width of the thill-bar base 11, those used for light buggies being considerably narrower than those adapted for use on carry-alls and heavier carriages.

The anti-rattler frame consists of an L-shaped bar having the arms 12 and 13, generally of circular cross-section, extending at right angles with each other and furnished with screw-threads at their end portions, the adjustable side-arm 14 having a screw-thread at its lower end and a transversely perforated screw-threaded collar 15 at its upper end which is screwed on to the end of the arm 12. The lower ends of the arms 13 and 14 extend through slots 16—16 in the wedge-bar 17 which forms the lower portion of the frame. The rear surface of this wedge-bar has the recess 18 and from the center of the bar extends the wedge 19 having the convex back 20 and the concave front 21 extending to the lower edge of the wedge-bar and increasing the thickness of the same at this point.

The spring is constructed of flat stock of a width equal to the recess 18 of the wedge-bar, being bent to form three concave leaves, of which the rear leaf 22 is considerably longer than the intermediate leaf 23 and the front leaf 24 being connected with the intermediate leaf by the tubular portion 25 which is adapted to embrace the arm 12, the leaf 22 then resting in the recess 18 of the wedge-bar, while the leaves 23 and 24 by this formation tend to separate from each other.

In placing the device in position the spring is first secured to the frame by passing the arm 12 through the tubular portion 25. The collar 15 of the arm 14 is then screwed on to the end of the arm for a distance determined by the outside width of the arms 9—9. The ends of the arms 13 and 14 are now passed through the slots 16—16 in the wedge-bar 17 and nuts 26—26 are screwed on to these arms

to force the wedge bar upward and increase the tension or expansion of the leaves of the spring by separating the rear leaf 22 from the intermediate leaf 23, this spreading action forcing the leaf 24 against the base 11 of the thill-bar and the leaf 23 forward until, if such tension is required, the tubular portion 25 is brought to bear against the upper end of the leaf 24, the rear leaf 22 being at the same time held from lateral movement by being seated in the recess 18 of the wedge-bar. By this construction the spring may be adjusted for the wear of the coupling, while, by the use of the movable side-arm 14, the frame may be fitted to thill-couplings of various sizes.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In an anti-rattler for thill-couplings, the combination with a frame formed of a cross-arm, a side-arm extending downward therefrom, a second side-arm adjustably secured to the cross-arm, and a device for connecting the lower ends of the side-arms, of a spring secured to the cross-arm and depending therefrom.

2. In an anti-rattler for thill-couplings, the combination with a bent spring having leaves adapted to be spread outward, of a frame to which the spring is secured, a wedge located between two of the leaves of the spring, and

mechanism for drawing the wedge into place to separate the leaves.

3. The combination with a frame composed of the arms 12 and 13 screw-threaded at their ends, the side-arm 14 having the screw-threaded collar 15 adjustable on the end of the arm 12, and a cross-bar connecting the ends of the arms 13 and 14, of a spring secured to the arm 13 and depending therefrom.

4. The combination with a frame consisting of the arms 12 and 13 screw-threaded at their ends, the arm 14 screw-threaded at its lower end and having the screw-threaded collar 15 for engaging the end of the arm 12, the cross-bar 17 having the slots 16—16 through which the lower ends of the arms 13 and 14 extend, the recess 18 and the wedge 19, and the nuts 26—26 on the ends of the arms 13 and 14, of a spring, consisting of the leaves 22 and 23 connected by the tubular portion 25, embracing the arm 12, and the leaf 24 bent upward from the leaf 23, the leaf 22 being considerably longer than those marked 23 and 24 and being seated in the recess 18 of the cross-bar, as described.

In witness whereof I have hereunto set my hand.

ALLAN FRASER.

Witnesses:

HENRY J. MILLER,  
M. F. BLIGH.